Servo Control From Python

EGR 445/545: Stepping Stone 3 - Single Servo Control

Overview

In this assignment, you are building on previous stepping stones to demonstrate that you can command one servo over its entire range of motion from Python.

Python Requirements

First, verify that you can enter values between 1000 and 2000 in Python and move the servo through out its entire 180 degree range of motion. Then, command the servo to move from 0 to 180 degrees in several increments with a pause between each one using a `for` loop. Once you have things working in a `for` loop, demonstrate that to the instructor.

- your code must give an initial command that sends the servo to a "home" position
- the servo should wait in the home position until the next "go" command is received
- at each step in the `for` loop, your Python code should send the next servo delay to the Arduino
  - the servo delay must be in microseconds and must be a number between 1000 and 2000
  - each delay will be converted from an integer to two bytes (`msb` and `lsb`) which are then transmitted to the Arduino
    - `msb` and `lsb` are single byte integers (integers between 0 and 255)
  - based on your work on PA 1, the Arduino will receive `msb` and `lsb` and reassemble them into an integer
  - the integer will be used to command the servo using `myservo.writeMicroseconds`